

INControl Diabetes Across Indiana

Indiana State Department of Health

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No End in Sight as Diabetes Epidemic Gains Speed

According to the Centers for Disease Control and Prevention (CDC), the United States diabetes epidemic is picking up speed like a “runaway train.” Type 2 diabetes makes up 90% to 95% of these cases. Unlike type 1 diabetes, type 2 diabetes is preventable, but that does not mean Americans are preventing it. Seven percent of the U.S. population (21 million people) have diabetes. And the diabetes epidemic is growing by almost 5% each year, according to a study led by Linda Geiss, MA, the CDC’s Chief of Diabetes Surveillance. Geiss says that diabetes has grown for the past 15 years and there is no hint of it slowing down. So can the epidemic be stopped? According to Geiss, the answer is “No.” “The strength and magnitude of the change is so great, this is not something we can stop overnight,” she says. “Like a runaway train, we must slow it down before we can stop it.” From the time period between 1963 to 2005, three

distinct stages were found in the diabetes epidemic: 1963 to 1975 was a period of a sharp increase in diabetes. Prevalence increased from 13.6 to 25.8 per 1,000 Americans. Then it leveled off in 1975 and did not rise until 1990. It is not clear exactly why this happened, but it could be due to the standardization of diabetes diagnosis in 1975. Then, in 1990, the numbers diagnosed with diabetes increased dramatically again. Prevalence rose from 26.4 to 54.5 per 1,000 Americans. Ann Albright, PhD, RD, Director of the CDC’s Division of Diabetes Translation says that this rise in diabetes could undo the progress that has been achieved in fighting heart disease. “With diabetes beginning to strike at younger ages, we may reverse the trends we have seen in reducing heart disease.” According to CDC researcher James Boyle, PhD, by 2050, the number of people with diabetic retinopathy and vision-threatening

diabetic retinopathy is projected to triple. Hearing may also be an issue for people with diabetes. A study with researcher Catherine C. Cowie, PhD, of the National Institute of Diabetes and Digestive and Kidney Diseases, shows that diabetes doubles a person’s risk of hearing impairment. The study suggests that 40% of people with diabetes may suffer some degree of hearing impairment. The U.S. may not be able to afford what is needed to reverse the diabetes epidemic. “The annual cost of diabetes in the U.S. is \$132 billion and that is probably an underestimate,” Albright said.

SOURCES:

* American Diabetes Association 67th Annual Scientific Sessions, Chicago, June 22-26, 2007.

*Linda S. Geiss, MA, Chief, Diabetes Surveillance, CDC.

*Ann Albright, PhD, RD, Director, Division of Diabetes Translation, CDC.

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What is the National Diabetes Education Program?

Founded in 1997, the National Diabetes Education Program (NDEP) is a federally-sponsored initiative that involves public and private partners in efforts to improve the treatment and outcomes for people with diabetes, promote early diagnosis, and prevent or delay the onset of diabetes. NDEP’s goal is to reduce the illness and death caused by diabetes and its complications. For more information

visit NDEP’s website at www.ndep.nih.gov or call 1-800-438-5383 to obtain free diabetes materials. They may be downloaded, reproduced, and distributed without copyright restrictions.



Diabetes & Oral Health

Diabetes affects millions of Americans each year. If diagnosed with diabetes, the disease can cause problems with eyes, nerves, kidneys, and heart, as well as other parts of the body. Diabetes can lower resistance to infection and can slow the healing process. The most common oral health problems associated with diabetes are the following:

- Tooth decay
- Periodontal (gum) disease
- Salivary gland dysfunction
- Fungal infections
- Lichen planus and lichenoid reactions (inflammatory skin disease)
- Infection and delayed healing
- Taste impairment

Diet and Tooth Decay

When diabetes is not controlled properly, high glucose levels in saliva may help bacteria thrive. Plaque that is not removed can eventually harden (calcify) into calculus, or tartar. When tartar collects above the gumline, it becomes more difficult to thoroughly brush and clean between teeth. This can create conditions that lead to chronic inflammation and infection in the mouth. Because diabetes reduces the body's resistance to infection, the gums are among the tissues likely to be affected. Periodontal diseases are infections of the gum and bone that hold your teeth in place. Periodontal disease often is linked to the control of diabetes. For example, patients with inadequate blood sugar control appear to develop periodontal disease more often and more severely, and they lose more teeth than do people who have good control of their diabetes. People with diabetes should visit their dentist immediately if they have:

- Gums that bleed easily
- Red, swollen, or tender gums
- Gums that have pulled away from the teeth
- Pus between the teeth and gums when gums are pressed
- Persistent bad breath or bad taste in the mouth
- Permanent teeth that are loose or separating
- Any change in the way teeth fit together when biting
- Any change in the fit of partial dentures

People with diabetes need to tell their dentist if they have diabetes, if the disease is under control, if there has been any change in medical history, and the names of all prescription and other medicines that they are taking.

Fungal Infections

Bacteria, viruses, and fungi occur naturally in the mouth. However, under some situations they may proliferate and impede or defeat the body's defenses. Oral candidiasis and

oral thrush, fungal infections in the mouth, appear to occur more frequently among people with diabetes including those who wear dentures. People who smoke, have high blood glucose levels, or often are required to take antibiotics, are more likely to have problems with fungal infections in the mouth. A dentist may prescribe antifungal medications to treat these conditions.

Proper Dental Care

Preventive oral health care, including professional cleanings at the dental office, is important to control the progression of periodontal disease and other oral health problems. Regular dental checkups and periodontal screenings are important for evaluating overall dental health and for treating dental problems in their initial stages. More frequent evaluations and preventive procedures, may be needed to maintain good oral health. Oral care products that display the American Dental Association's Seal of Acceptance, an important symbol of a dental product's safety and effectiveness when the products are used as directed, are best. Brushing twice a day with fluoride toothpaste and cleaning once a day between teeth with floss or an interdental cleaner helps remove decay-causing plaque. In addition antimicrobial mouthrinse or toothpaste to control gingivitis may be useful. Watch for signs and symptoms of oral disease and contact the dental office immediately when a problem arises.

State Statistics

Data from the Indiana 2006 Behavioral Risk Factor Surveillance Survey revealed that 67.2% of the general state population had visited a dentist in the previous year versus 54.5% of individuals with diabetes. While 68.1% of the general population had a professional cleaning in the previous 12 months, only 57.9% of individuals with diabetes had received the same care. Only 28.3% of the general population had lost one to five teeth versus 32.5% of people with diabetes. Only 9.9% of the general population had lost 6 or more but not all teeth versus 23% of people with diabetes. People with diabetes should practice good oral hygiene at home, follow their physician's instructions regarding diet and medications, and schedule regular dental checkups to maintain a healthy smile.

Sources:

The Journal of the American Dental Association, Vol. 133(1299), September 2002.

Indiana State Department of Health, Behavioral Risk Factor Surveillance Survey, 2006.

Smoking & Diabetes: A Hazardous Duo

As documented in the American Diabetes Association's technical review "Smoking and Diabetes" a large body of evidence from epidemiological, case-control, and cohort studies provides convincing documentation of the causal link between cigarette smoking and health risks. Cigarette smoking is the leading avoidable cause of mortality in the U.S., accounting for 400,000 deaths each year. Cigarette smoking accounts for one out of every five deaths in the U.S. and is the most important modifiable cause of premature death. Cigarettes provide the delivery system for nicotine, an addictive substance related to various pharmacological, biochemical, and psychological processes that interact to support a compulsive pattern of drug use. Tobacco has many bad health effects, particularly for people who have diabetes. No matter how long people have smoked, their health will improve after they quit. (1)

Smoking Hurts Your Health

Smoking can increase a person's chance of developing type 2 diabetes. Smoking 16 to 25 cigarettes a day, the risk of developing diabetes is three times greater than a non-smoker's risk. (2) With type 2 diabetes, the body does not respond to the insulin made by the pancreas. Insulin helps blood glucose enter the body's cells for fuel. When people smoke, their bodies are less able to respond to insulin. When the body resists insulin, glucose levels increase. Resistance does not start to reverse until one has not smoked for 10 to 12 hours. Studies show that smokers have poorer glucose control than non-smokers do. Ex-smokers have the same blood glucose control as non-smokers. When people have type 1 or type 2 diabetes, glucose control is very important. Smoking actually raises blood sugar levels, making it harder to control diabetes. The A1C test checks how well a person has controlled their glucose level over three months. The goal is to keep the A1C at 7% or less. When someone has diabetes and smokes, the A1C level increases. Quitting smoking will help decrease A1C levels to that of a non-smokers. Diabetes and smoking is a hazardous combination because having diabetes increases a person's risk of other complications but adding smoking on top of diabetes the chances for complications arising are double of that of a non-smoker. Smoking can aggravate many problems that people with diabetes already face. There are many components in cigarette smoke that are toxic - nicotine, carbon monoxide, tar - and they alter the nutrients that

need to reach other parts of the body.

A greater problem is the damage to blood vessels from smoking. Vessels in the body can be compromised, which cuts off the flow of oxygen to other parts of the body. People with diabetes who smoke are at a greater risk of developing diabetic retinopathy, neuropathy, and nephropathy than people that have diabetes and do not smoke. (2), (3) Other complications that are increased by smoking are heart attack, stroke, miscarriages or stillbirths, and an increase in cholesterol levels and other fats in the blood. Smoking damages and constricts blood vessels which can lead to foot ulcers and blood vessel disease, leg and foot infections, respiratory infections, and cancer of the mouth, throat, lung, and bladder. (1)

Why Quitting Can be Hard

People continue to smoke for two reasons: first, nicotine is highly addictive. Often, a person who quits smoking goes through withdrawal. Symptoms of withdrawal include: being irritable, sweating, having headaches, diarrhea, or constipation, as well as feeling restless, tired, or dizzy. Withdrawal is usually the worst on the second day after quitting, and it gradually lessens with time. Second, many people become psychologically addicted to smoking. It is part of their daily life, it helps them wake up in the morning, comforts them when they are upset, and rewards them for a job well done. Smoking also has pleasurable effects. It relaxes people and perks them up. These factors make it easy to smoke and hard to quit. The pleasures of smoking start within seconds of lighting up. However, negative effects can take years to manifest. (1)

Be a Quitter

There are many ways to quit: cold turkey, gradually with a group or by yourself, or Nicotine Replacement Therapy (NRT). Talk to a health care team provider about deciding to quit. They can help you choose the best method of quitting. Don't be discouraged if not successful the first time. Once a person has quit, the following three months are the hardest time. Most people who return to smoking do so at that time. During those first three months, people have broken the physical addiction but not yet shaken their psychological dependence on cigarettes. So have some ideas available to help fight off temptation. However, do remember quitting smoking is the most important thing that can be done for one's health overall. (1)

Smoking in Indiana

The results of the 2006 Indiana Behavior Risk Factor Surveillance System Survey (BRFSS) shows that Indiana has gotten worse in the categories of weight and physical activity. However, the smoking rate has decreased. The BRFSS monitors health behaviors and risk factors among Indiana adults in several categories, including nutrition and weight, physical activity, tobacco use, diabetes, blood pressure, and health care access. According to the Centers for Disease Control and Prevention, these health risks and behaviors are the leading causes of death and illness among both youth and adults in Indiana. Highlights from the report include:

- Smoking has decreased from 27.3% in 2005 to 24.1% in 2006
- More Hoosiers are considered obese: 27.2% in 2005 to 27.8% in 2006
- 78% of Hoosiers eat less than five servings of fruits and vegetables a day
- 25.3% of all Hoosiers do not participate in moderate physical activity at least three times a week
- 26.2% have been told that they have high blood pressure
- 8.1% have been told they have diabetes
- 35.1% are considered overweight based on the Body Mass Index (BMI)
- Indiana is now 5th in the percentage of current smokers, behind Kentucky, Mississippi, Oklahoma, and West Virginia (Indiana ranked 2nd in 2005)
- Indiana is now 10th in the percentage of people considered obese, no change from 2005. (4)

What is the State Doing About It?

INShape: Governor Mitch Daniels launched INShape Indiana in July 2005, challenging Hoosiers to make healthy choices. The free, web-based program provides statewide information on physical fitness activities, nutrition, and smoking cessation. INShape Indiana is personalized and allows participants to track progress on the web site (www.INShape.IN.gov), which is updated biweekly. The purpose of INShape Indiana is to empower individuals to adopt healthy behaviors and improve their quality of life. To join INShape Indiana, individuals and groups can log onto the website (www.INShape.IN.gov) and register for free by answering a brief survey.(5)

The Indiana Tobacco Quitline



The Indiana Tobacco quitline is a free, statewide, phone-based tobacco cessation resource. The quitline provides information to tobacco users and non-tobacco users on tobacco dependence and its treatment. Information may include advice for family and friends on helping a tobacco user quit and how to support a quit attempt. The quitline provides support for people who want to stop smoking or use tobacco products, offers information on tobacco dependence for health professionals, and families or friends of tobacco users, and provides information on community resources. Quitline services are available in both English and Spanish, and Interpretive Services will be utilized for other languages. The hours to speak with a Quit Coach is 8 a.m. to 12 a.m. EST, 7 days a week.

1-800-QUIT-NOW (1-800-784-8669)

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- (1) Smoking and Diabetes: American Diabetes Association. Diabetes Care, 27(1). January 2004.
- (2) Smoking and Diabetes: Information for Patients. University of Pittsburgh Medical Center. <http://patienteducation.upmc.com/Pdf/SmokingDiabetes.pdf>. September 10, 2007.
- (3) Tipsheet: Tobacco in Indiana. Indiana University. <http://newsinfo.iu.edu/tips/page/normal/4609.html>. September 10, 2007.
- (4) Indiana State Department of Health, Behavioral Risk Factor Surveillance Survey, 2006.
- (5) Indiana Governor Encourages Physical Fitness With New 'INShape Indiana' web site at www.inshape.IN.gov. ©2005 Business Wire. http://findarticles.com/p/articles/mi_m0EIN/is_2005_July_20/ai_n14797172/print. September 10, 2007.

Upcoming Events

November

5, 12, 19, 26: Marion County Health Department: ABC's of Diabetes class, Lawrence Public Library (north-east) 7898 N. Hague Road, 1:30-3:30 p.m.

10: Too Sweet For Your Own Good: Managing Diabetes Conference. 8:00-3:30 p.m. University Place Conference Center in Indianapolis, IN.

All month: American Diabetes Month - contact the ADA office for details on activities - (317) 352-9226

Recipe Corner

Curried Chicken Salad with Granny Smith Apples

12 oz. cooked, diced white meat chicken
1/2 small onion, minced
2 celery stalks, diced
1 large Granny Smith apple, unpeeled and cubed into 1/2-inch pieces
2 Tbsp raisins or currants
2 Tbsp sliced toasted almonds

Dressing

1/3 cup nonfat mayonnaise
1/4 cup nonfat sour cream
1 tsp curry powder
1 tsp lemon juice
Salt and Pepper to taste

1. In a large bowl, combine the chicken, onion, celery, apple, raisins or currants, and almonds.
2. Whisk together the dressing ingredients, pour over the chicken, and toss well.

Nutrition Facts

Serving Size = 4 oz
Fruit Exchanges = 1
Lean Meat Exchanges = 4

Amount Per Serving

Calories = 235
Total Fat = 5
Cholesterol = 75 mg
Sodium = 235 mg
Total Carbohydrates = 18 gr

(Diabetes Forecast, pg. 60, September 2007)

Individualized food plans, as well as advice from a physician or registered dietitian, should always supercede a recipe from this or any other publication.



Governor Daniels has challenged Hoosiers to start making healthier choices. This call to action begins with INShape Indiana. The purpose of INShape Indiana is to empower individuals to adopt healthy behaviors and improve their quality of life. The free, web-based program provides statewide information on physical fitness activities, nutrition, and smoking cessation. If someone has diabetes, not only is it important to manage the disease, but to also maintain a healthy diet, get plenty of exercise, and stop smoking. The INShape Indiana web site has valuable information on how to incorporate these healthy behaviors in every day life. www.INShape.IN.gov

American

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 **American Diabetes Association[®]**

IN Control: Diabetes Across Indiana is a semi-annual newsletter published by the Indiana State Department of Health Diabetes Prevention and Control Program in conjunction with the Indiana Diabetes Advisory Council (DAC). The purpose of the newsletter is to provide accurate and timely information on diabetes to those interested in addressing the burden of diabetes in Indiana.

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317-233-7634
www.in.gov/isdh/programs/diabetes/splash.htm

Diabetes Control Means a Longer and Better Life

Overall quality of life will be improved for any individual with diabetes simply by taking control of their diabetes. Knowing the ABCs and keeping blood sugar levels as close to normal as possible is beneficial. Lowering blood sugar levels can greatly reduce the risk of:

- Eye Disease (Retinopathy)
- Kidney Disease (Nephropathy)
- Nerve Disease (Neuropathy)
- Heart (artery) Disease

What are the ABC's of Diabetes?

A - A1C test, shows you what your blood glucose has been over the last three months. The A1C goal for most people is below 7. High blood glucose levels can harm your heart and blood vessels, kidneys, feet, and eyes.

B - Blood Pressure, The goal for most people is 130/80. High blood pressure makes your heart work too hard. It can cause heart attack, stroke, and kidney disease.

C - Cholesterol - The LDL goal for most people is less than 100. The HDL goal for most people is above 40. LDL or "bad" cholesterol can build up and clog your blood vessels. It can cause a heart attack or a stroke. HDL or "good" cholesterol helps remove cholesterol from your blood vessels.

For more information and materials on Controlling Your ABC's visit www.ndep.nih.gov

Indiana State Diabetes Prevention and Control Program

The Diabetes Prevention and Control Program (DPCP) is pleased to bring you Volume 1 of IN Control: Diabetes Across Indiana, that highlights current diabetes events, research, and initiatives in the State of Indiana.

Who We Are:

The Diabetes Prevention and Control Program is part of the Division of Chronic Disease at ISDH. The DPCP is funded through a Cooperative Agreement from the Centers for Disease Control and Prevention. The mission of the DPCP is to improve the quality of life for persons with diabetes living in Indiana. The Program works closely with the members of the Indiana Diabetes Advisory Council (DAC) to accomplish the goals of the State's Plan to Control and Prevent Diabetes in Indiana. The primary goals of the program include promoting: annual eye exams, annual comprehensive foot exams, A1C's (at least biannually), annual

influenza, pneumococcal immunization, reductions in health disparities for high risk groups, and to promote wellness, physical activity, weight management, blood pressure control, and smoking cessation.

One Call, One Click, NDEP's new awareness campaign promoting NDEP as "Your Source of Free Diabetes Information" was launched September 2007. *One Call, One Click* media kits are available for distribution to general media, health care professional media, and partners. Media kits include new print, radio, and online PSAs in both English and Spanish, and can be used to inform patients, organization members, and community partners about the wealth of free diabetes prevention and control information available through NDEP at www.ndep.nih.gov



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